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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,319	04/12/2001	Mototaka Iwata	MIZ33	3494

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EXAMINER

DUONG, THANH P

ART UNIT PAPER NUMBER

3711

DATE MAILED: 09/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,319

Applicant(s)

IWATA ET AL.

Examiner

Tom P Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 1 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 1 objected to because of the following informalities: "...restitution coefficient should read coefficient of restitution..." Appropriate correction is required.

Claim 7 is objected because of the following informalities. The test values of "...30 GPa and not more than 210 GPa...appears to be substantially large and unreasonable values based on prior art test values. Applicant is requested to confirm the claimed values.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou (6,165,081). With respect to claim 1, Chou discloses on Figures 1 and 9 a golf club head (wood or iron) comprising a face 16 or 38. The trampoline plate 16 is the striking surface for hitting the golf ball 20. (Col. 3, lines 17-18). The striking surface of the trampoline plate has a sweet spot where the ball comes in contact from striking a ball with a club. Chou shows on Table 1 and 2 the testing of the club head having a coefficient of restitution of at least 0.81 and not more than 0.95 at an impact velocity at 120 and 160 ft/s. The Applicant's impact velocity at 44m/s (144 ft/s) is different than the prior art impact velocity but it would have been inherent and obvious that the prior art has a testing impact velocity that is capable of producing a coefficient of

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restitution (COR) of at least 0.81 and less than 0.95. Furthermore, Chou discloses that a lower impact velocity provides a higher COR. (Col. 3, lines 5-11). With respect to claims 2 and 3, Chou discloses a titanium front face (effective face area) having a dimension of 3.5 inch by 1.75 inch ellipse. ($\text{Area} = 3.5 \times 1.75 = 6.125 \text{ in}^2 = 3952 \text{ mm}^2$), which is within the range of 2500 – 5000 mm^2 . (Col. 5, lines 21-22). In addition, USGA does not expressly state specific parameters for a golf club or standard regulation golf club. (See Rule 4 and Appendix II on USGA website at www.usga.org). However, the USGA proposes a club head size limit of no more than 385 cc of volume but imposes no limitation on the dimension of the striking face. Therefore, it is possible for golf club's manufacture to fabricate a golf club with difference in sizes for the club face; thus, the effective face area or surface area of a central portion could be made of any given dimension. Chou also discloses that the head part of the club head is often hollow. (Col. 4, lines 17-18). With respect to the wall portions, Chou shows a frame opening 42 on Figure 9 supporting the stopper plate 34 and the spacer 36 acts as a wall portion which supports the trampoline plate 38. Table 1 shows the testing without a stopper plate 34 and Table 2 shows the testing with a stopper plate 34. Thus, without a stopper plate, the trampoline plate 38 on Figure 9 fits right into the frame opening 42 and this frame opening has a wall portion. With respect to claims 4 and 5, Chou discloses above a front face having a dimension of 3.5 by 1.75 inch elliptical shape and based on the front face configuration, 1.75 inch (44.5 mm) is an effective deflection length as claimed. With respect to claim 6, Chou shows on Table 3 the thickness of various trampoline plate material has at least 1.0 to 2.5 mm at the sweet spot. With respect to claim 7, Chou discloses various values of Young's Modulus (elasticity) on Table 3 and it appears as best understood by Examiner that these values would encompass the claimed values or at least would fall within the routine optimization expected by one skilled in the art.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (703) 305-4559. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Sewell can be reached on (703) 308-2126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7768 for regular communications and (703) 305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4148.

Tom Duong
September 4, 2002


Paul T. Sewell
Supervisory Patent Examiner
Group 3700